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EXAMINER	
CHOW, JEFFREY J	

ART UNIT	PAPER NUMBER
2628	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/814,401	HOLLOWBUSH ET AL.	
	Examiner	Art Unit	
	Jeffrey J. Chow	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 May 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-11,13 and 14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-11,13 and 14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 June 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1, 3 – 11, 13, and 14, filed 22 May 2008, have been considered but are moot in view of the new ground(s) of rejection.

Krishnamurthy's et al. (US 5,469,188) system allows a user to manually select which filters to apply to analyze a video to determine errors. Then the system automatically tracks these errors and uses a cursor 36 to point to these errors (Figure 2). The user would either press the "NEXT" or "PREV" buttons to go to the next or previous errors, respectively (column 3, lines 36 – 40). By manually pressing the "NEXT" or "PREV" buttons, the system automatically pinpoints the error using cursor 36.

In Krishnamurthy's system, the format of the display stays the same during the change in the video images over time. However simple modifications can be applied to allow subwindows to certain parts of the display as taught by Lau et al. (US 6,525,746). The modification allows users to change the format of the display.

Krishnamurthy does not disclose the format of display is automatically changed when a selection criterion has occurred. Yamazaki discloses a surveillance system that detects moving objects (paragraph 23) and detects a predetermined color (paragraph 33) and upon these detections, the area with the moving object or the area having the predetermined color is zoomed in on (paragraph 21 and Figure 3). Abecassis discloses a user selects a particular area of interest to zoom in on and changes the format of a display from a full representation of a video 1090 to a zoomed area 1094 and a miniature full screen area 1095 (column 41, line 46 – column 42 – line 23 and Figure 10D). It would have been obvious to modify Krishnamurthy's system to

automatically change the format of the display once an alarm or a filter has been triggered using the teachings of Yamazaki and Abecassis. Other modifications can be made on Krishnamurthy's system is once an error is detected, a user can keep track of (or select) the error during the animation of the video using the teachings of Abecassis.

The 35 U.S.C. 112 rejection have been withdrawn due to applicant's amendments.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3 – 8, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krishnamurthy et al. (US 5,469,188) in view of Yamazaki et al. (US 2003/0142209) and Abecassis (US 5,610,653) and Lau et al. (US 6,525,746).

Regarding independent claim 1, Krishnamurthy teaches an apparatus for use in analyzing video images, comprising

a video input signal providing a video signal to be analyzed, the video input signal including at least one of successive picture frames and fields containing a video picture (column 2, lines 52 – 67 and Figure 1: the video file can be stored on the computer system 10, in the frame buffer of the DSP 20, and in the video recorder 22 and the computer system 10 is coupled to a digital processing system (DPS) 20 that includes at least one frame buffer that contains one

full frame of the digital component image) that changes over time (column 1, lines 6 – 10: video signals from digital images produced from the computer animation process),

a video processor operable to produce a display of information on a display device at least party from the video input signal (column 2, lines 52 – 67 and Figure 1: the DPS 20 is coupled to a video recorder 22 together with an associated component video monitor 24).

Krishnamurthy further teaches modes of display of the information comprise different selections of display elements, each of the different selections comprising one or more of

a full representation of the video picture contained in the video input signal selectively presented so as to occupy at least a portion of a display area of the formatted display (column 3, lines 16 - 19 and Figure 2: a display window 32 of panel display 30),

a zoom image including an area of particular scrutiny in said video picture selectively presented so as to occupy at least a portion of the display area of the formatted display (column 3, lines 21 - 31 and Figure 2: the display window 32 are status windows 37 that indicate the digital component values (YBR) of the pixel and includes pixel swatches of the pixel including the immediately preceding and following pixels on the same horizontal line),

a report of the video data characteristics of at least one point within the area of particular scrutiny (column 3, lines 21 – 31 and Figure 2: status windows 37 that display various characteristics of the pixels),

a subset of said full representation, said zoom image and said report (Figure 2: the input video 32, the status window 37 and the zoomed area of the area of particular scrutiny in the status window 37),

wherein controller coupled to the video processor and to at least one control input (column 2, lines 52 – 67 and Figure 1: a computer system 10 that has a central processor 12, a display 14 and an interface 16, such as a keyboard and mouse).

Krishnamurthy did not expressly disclose the display of information comprises a repetitively composed formatted display of images that is changed over time from one mode of display of information to an other mode of display of information, as the video input signal changes in time, and a user selects via the control input at least one selection criterion applied to the video signal to cause a change in the formatted display of images from said one mode to said other mode. However Krishnamurthy does disclose artist selects one of several pre-analysis functions to analyze the image (column 3, lines 7 – 15) and for all values of pixels that exceed the IRE level set by the level 44, a selected color ,such as magenta, is displayed in the error image window as a modulation of the portions 46 of the image that exceed the level; these options express different modes and changes the formatted display by mere presentation (column 3, lines 41 – 50). Yamazaki discloses a surveillance system that detects moving objects (paragraph 23) and detects a predetermined color (paragraph 33) and upon these detections, the area with the moving object or the area having the predetermined color is zoomed in on (paragraph 21 and Figure 3). Abecassis discloses a user selects a particular area of interest to zoom in on and changes the format of a display from a full representation of a video 1090 to a zoomed area 1094 and a miniature full screen area 1095 (column 41, line 46 – column 42 – line 23 and Figure 10D). It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Krishnamurthy's system of applying filters to a video and placing a cursor on an area that triggers the filters by upon detection of the filters, to automatically zoom in

on the triggered area, as taught by Yamazaki, and to change the format of the display to show a zoomed in area of the triggered area while displaying a miniature representation of the full video image, as taught by Yamazaki. One would be motivated to do so because this would allows the user to better analyze an image at a particular area and also this would grabs the attention of the user to a particular area.

Krishnamurthy did not expressly disclose the user selects via the control input a selection of the display elements to be included in the display composed by the video processor when the selection criterion is met. Lau discloses various display windows 54-62, a main window 50, within which a user selects one or more subordinate windows 52, each of which may be concurrently active at a given time (column 7, lines 28 – 33 and Figure 3). Lau also discloses the subordinate windows 52 may be opened or closed, moved or resized (column 7, lines 33 – 34 and Figure 3). Lau also discloses the subordinate windows 52, comprises of a video window 54, a zoom window 56, and one or more data windows 62 (column 7, lines 40 – 43 and Figure 3). It would have also been obvious to one of ordinary skills in the art at the time of the invention to modify Krishnamurthy's system to allow the display window, the status window, and the zoom window to be opened, closed, resized and moved or selectively displayed at any given time before, during, and after the video analysis. One would be motivated to do so because this would give the user increased flexibility in viewing the desired information on a display.

Regarding dependent claim 3, Krishnamurthy teaches video processor has a display mode wherein the full representation of the video picture, the zoom image and the report of said video data characteristics are presented at different parts of the display device and present

progressively smaller parts of the area of particular scrutiny (Figure 2: the input video 32, the status window 37 and the zoomed area of the area of particular scrutiny in the status window 37 are displayed at different areas, the zoomed area of particular scrutiny shows a smaller area of the status window 37 and the status window 37 shows further details of the zoomed area of particular scrutiny).

Regarding dependent claim 4, Krishnamurthy discloses the information of the pixel displayed in the selectable status window 37 (Figure 2), which reads on the claimed tabular display, which in the disclosure of the disclosed invention the tabular display just shows information of the pixel data.

Regarding dependent claim 5, Krishnamurthy further discloses the selectable status window 37 that indicate the (X,Y) pixel location (POS) of the cursor 36 (column 3, lines 21 – 30 and Figure 2), which relates to the claimed sample location information and color sample data.

Regarding dependent claim 6, Krishnamurthy discloses the pixel swatches in the selectable status window 37 (column 3, lines 21 - 31 and Figure 2), which reads on the claimed color swatch of the color sample data.

Regarding dependent claim 7, Krishnamurthy further discloses a digital component domain image is stored in the frame buffer of the DPS 20 (column 2, lines 61 – 63) and errors are displayed in respective windows for each test and a NEXT or PREV button moves the cursor

36 to the next or previous pixel that exhibited an error of the selected type (column 3, lines 36 – 40). The frame buffer of the DPS 20 relates to the claimed digital video signal. It is inherent that a digitized video signal increments at least one frame at a time and that each frame contains at least one of discrete sample data and discrete color state elements defining pixels, which reads on the claimed video input signal contains a digital video signal with successive picture frames and the video processor produces the formatted display repetitively for increments of at least one frame, from one of discrete sample data and discrete color state elements defining pixels in the video input signal.

Regarding dependent claim 8, Krishnamurthy discloses the video recorder 22, which relates to the claimed video sampler. The video recorder 22 is operable to produce a digitized video signal. It is inherent that a digitized video signal increments at least one frame at a time and that each frame contains at least one of discrete sample data and discrete color state elements defining pixels and Krishnamurthy discloses errors are displayed in respective windows for each test and a NEXT or PREV button moves the cursor 36 to the next or previous pixel that exhibited an error of the selected type (column 3, lines 36 – 40), which reads on the claimed video processor produces the formatted display for increments of at least one frame from one of discrete sample data and discrete color state elements defining pixels in the video input signal.

Regarding dependent claim 9, Krishnamurthy did not expressly disclose the video processor is operable to resize at least part of the video picture for presentation in part of an area of the formatted display that occupies less than a full area of the formatted display, and wherein

resizing by the video processor includes at least one of recalculating pixel values, sampling pixel values and reading out selected pixel values. Lau discloses various display windows 54-62, a main window 50, within which a user selects one or more subordinate windows 52, each of which may be concurrently active at a given time (column 7, lines 28 – 33 and Figure 3). Lau also discloses the subordinate windows 52 may be opened or closed, moved or resized (column 7, lines 33 – 34 and Figure 3). Lau also discloses the subordinate windows 52, comprises of a video window 54, a zoom window 56, and one or more data windows 62 (column 7, lines 40 – 43 and Figure 3). It would have also been obvious to one of ordinary skills in the art at the time of the invention to modify Krishnamurthy's system to allow the display window, the status window, and the zoom window to be opened, closed, resized and moved or selectively displayed. One would be motivated to do so because this would give the user increased flexibility in viewing the desired information on a display.

Regarding dependent claim 11, Krishnamurthy did not expressly disclose video processor allots the formatted display to accommodate said change in the formatted display of images from said one mode to said other mode. Abecassis discloses a microprocessor 511 (Figure 5) and a user selects a particular area of interest to zoom in on and changes the format of a display from a full representation of a video 1090 to have a zoomed area 1094 and a miniature full screen area 1095 (column 41, line 46 – column 42 – line 23 and Figure 10D). It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Krishnamurthy's system to incorporate a processor that changes from one mode of display, such a full representation of a video, to another mode of a display, such as a zoomed image with a miniature full representation

of a video, as taught by Abecassis. One would be motivated to do so because a specialize processor would be faster and efficient for changing the format of a display than a regular CPU and a specialize processor would off load the processing from the CPU.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Krishnamurthy et al. (US 5,469,188) in view of Yamazaki et al. (US 2003/0142209) and Abecassis (US 5,610,653) and Lau et al. (US 6,525,746) and Yanker (US 5,187,776).

Regarding dependent claim 10, Krishnamurthy did not expressly disclose the control input is operable by a user manually to select from the video input signal an area to be the area of particular scrutiny. Yanker discloses the cursor 16 of the enlarged image and the cursor 14 of the viewport 12 moves in unison (column 4, lines 23 - 27). It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Krishnamurthy's system to incorporate user input to manually select an area of scrutiny. One would be motivated to do so because this allow users to make self-careful analysis of the video that may not be desirable by the users, but not detectable by the computer. Krishnamurthy teaches the video processor is operable simultaneously to present the video picture and the zoom image including the area of particular scrutiny, in different areas of said formatted display (Figure 2: the input video 32, the status window 37 and the zoomed area of the area of particular scrutiny in the status window 37 are displayed at different areas).

Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krishnamurthy et al. (US 5,469,188) in view of Yamazaki et al. (US 2003/0142209) and

Abecassis (US 5,610,653) and Lau et al. (US 6,525,746) and McVeigh et al. (US 2002/0141615) and McCalla et al. (US 2004/0031061).

Regarding dependent claim 13, Krishnamurthy did not expressly disclose the controller and the video processor are operable to coordinate between automatic and manual selection of the area of particular scrutiny, wherein one of said manual selection and said automatic selection supersedes an other of said manual selection and said automatic selection for a limited period of time after said changing of the formatted display by the video processor when the selection criterion is met, however Krishnamurthy does disclose a pre-analysis of video signals obtained from a digital image that provides an artist in the preparation of animation sequences with an indication of color distortion errors so that the artist can correct such errors interactively during the animation process (column 2, lines 1 – 5) and automatic comparison may also be made to automatically set an alarm for the image if the number of errors exceeds a threshold limit (column 4, lines 8 – 11). McVeigh disclose automatically tracking a color object through a series of frames of data (claim 11). McCalla discloses after predetermined time period where there is no user input, automatically display plurality of information items (claim 3). It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Krishnamurthy's system to incorporate McVeigh's system of automatically tracking colored object in a video sequence by automatically tracking color errors in a video sequence and to also incorporate the principles of McCalla's system of automatically resuming the original process after a certain amount of time has elapsed without any user interaction by automatically tracking errors after a certain amount of time has elapsed without any user interaction. One would be motivated to automatically track color errors in a video sequence because this would allow users

to interactively view errors in real time while the video is being analyzed and one would be motivated to resume tracking errors after an elapsed time of no user interaction because this would allow users correcting errors to view the errors long enough to determine if it is desirable to correct these errors.

Regarding dependent claim 14, Krishnamurthy discloses an amplitude check in where each color component of each pixel in the RGB domain is checked to determine whether the value is within predetermined limits (column 3, line 50 – column 4, line 14), which reads on the claimed selection criteria for said automatic selection include a color gamut value criterion having at least one threshold value such that a value meeting the threshold value criterion is selected for particular scrutiny.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey J. Chow whose telephone number is (571)-272-8078. The examiner can normally be reached on Monday - Friday 10:00AM - 5:00PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on (571)-272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ulka Chauhan/
Supervisory Patent Examiner, Art Unit 2628